Amdt. Dated 17-Feb-2006

Supplemental Preliminary Amendment

Attorney Docket No.: 6037-006

## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

1-87 (Canceled)

- 88. (Currently Amended) An antioxidant composition comprising a polycationic casein phosphopeptide complex and at least one oil rich in Omega-3 or oil soluble active operable to inhibit oxidation, the at least one oil is selected from the group consisting of vegetable oils, animal oils, and the at least one oil soluble active is selected from the group consisting of vitamins, nutraceuticals, pharmaceuticals or combinations thereof., wherein the composition is operable to inhibit oxidation of lipids in emulsion.
- 89. (Currently Amended) The composition of Claim 88, further comprising at least one sulfated polysaccharide wherein the polycationic casein phosphopeptide is a caseinophosphopeptide-chitosan complex immiscible in oil.
- 90. (Currently Amended) The sulfated polysaccharide composition of Claim 89, further comprising at least one sulfated polysaccharide wherein the sulfated polysaccharide is selected from the group consisting of iota-carrageenan, kappa-carrageenan, lambda-carrageenan, chondroitin, heparin, dextran, and cyclodextrins, and or combinations thereof.
- 91. (Currently Amended) The composition of Claim 88, further comprising a medium-chain triglyceride wherein the polycationic casein phosphopeptide is a polycationic caprine casein phosphopeptide.
- 92. (Currently Amended) The medium-chain triglyceride composition of Claim 91, further comprising a medium-chain triglyceride wherein the medium-chain triglyceride is selected from the group consisting of: caproic (C:6.0), caprylic (C:8.0), and capric (C:10.0) triglycerides, and or any combinations thereof.

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- 93. (Previously presented) The composition of Claim 88, further comprising at least one non-reducing sugar or sugar polyol.
- 94. (Currently Amended) The composition of Claim 88, wherein the casein phosphopeptide is selected from the group consisting of alpha-casein, beta-casein, kappacasein, fragments thereof, and or any combinations thereof.
- 95. (Currently Amended) The composition of Claim 88, wherein the <u>polycationic</u> casein phosphopeptide <u>complex is a comprises</u> a <u>caprine chitosan</u> casein phosphopeptide <u>complex</u>.
- 96. (Currently Amended) The composition of Claim 88, further comprising at least one ingredient selected from the group consisting of alpha, beta, gamma or delta tocopherols, alpha, beta, gamma or delta tocotrienols, tocopherols, tocotrienols, beta-carotene, phospholipids, chitosan and or combinations thereof.
- 97. (Currently Amended) The composition of Claim 88, further comprising at least one phospholipid selected from the group consisting of egg yolk phospholipids, soybean phospholipids, and or combinations thereof.
- 98. (Previously presented) The composition of Claim 88, further comprising at least one ingredient selected from the group consisting of pH modifiers, chelating agents, polyphenols, modified starches, glycerides, fruit concentrate sweeteners, cocoa powder, and sucralose, and oil soluble flavors, vitamins, nutraceutical actives, and pharmaceutical actives.
- 99. (Currently Amended) The <u>composition pH modifiers</u> of Claim 98, wherein the pH modifiers are selected from the group consisting of citric acid, ascorbic acid, gluconic acid, and or combinations thereof.
- 100. (Currently Amended) The <u>composition</u> chelating agents of Claim 98, wherein the chelating agents comprise citric acid.
- 101. (Currently Amended) The <u>composition</u> polyphenols of Claim 98, wherein the polyphenols are derived from the fruit of *Solanum melongena*.

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- The composition emulsion of Claim 88, wherein the 102. (Currently Amended) emulsion is selected from the group consisting of water-in-oil microemulsion, water-inoil nanoemulsion, oil-in-water microemulsion, and or oil-in-water nanoemulsion.
- The composition easein phosphopeptide of Claim 103. (Currently Amended) 88, wherein the casein phosphopeptide comprises a trypsin-digested casein.
- The composition trypsin-digested casein of Claim 104. (Currently Amended) 103, wherein the trypsin-digested casein is selected from the group consisting of caprine casein characterized by a content of alpha.sub.s2.-casein greater than 15 percent and betacasein greater than 15 percent of the total casein.
- An antioxidant composition comprising at least one 105. (Currently Amended) polycationic casein fragment complex immiscible in oil, wherein the casein fragment is at least one of a phosphopeptide, a glycopeptide, a glyceride and or combinations thereof, operable to inhibit lipid oxidation, and at least one oil or oil soluble active operable to inhibit oxidation selected from the group consisting of vegetable oils including rice bran oil, flax, chia, hemp, castor, soybean, lesquerella, dehydrated castor oil, oil rich in Omega-3, or conjugated linoleic acid, animal oils including fish, egg, poultry, and beef oils rich in Omega-3, or conjugated linoleic acid, and or oil-soluble actives including vitamins, nutraceuticals, pharmaceuticals, or flavors, or combinations thereof.
- The composition casein fragment of Claim 105, 106. (Currently Amended) wherein the casein fragment is characterized by a content of alpha.sub.s2.-casein greater than 15 percent of total casein and medium-chain triglycerides.
- The composition phosphopeptide of Claim 105, 107. (Currently Amended) wherein the phosphopeptide comprises a caseinophosphopeptide.
- The composition easeinophosphopeptide of Claim 108. (Currently Amended) 107, wherein the caseinophosphopeptide comprises a caprine caseinophosphopeptide.
- The composition of Claim 105, further comprising 109. (Currently Amended) at least one ingredient selected from the group consisting of alpha, beta, gamma or delta

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tocopherols, alpha, beta, gamma or delta tocotrienols, tocopherols, tocotrienols, betacarotene, phospholipids, chitosan and or combinations thereof.

- 110. (Currently Amended) The composition of Claim 105, further comprising at least one phospholipid selected from the group consisting of egg yolk phospholipids, soybean phospholipids, and or combinations thereof.
- 111. (Previously presented) The composition of Claim 105, further comprising at least one ingredient selected from the group consisting of pH modifiers, chelating agents, polyphenols, modified starches, glycerides, fruit concentrate sweeteners, cocoa powder, sucralose, and oil-soluble flavors, vitamins, nutraceutical actives, and pharmaceutical actives.
- 112. (Previously presented) The composition of Claim 105, further comprising a polyphenol selected from the group consisting of *Solanum melongena* polyphenols.
- 113. (Previously presented) The composition of Claim 105, further comprising non-reducing sugars and sugar polyols.
- 114. (Previously presented) The composition of Claim 105, further comprising pH modifiers wherein the acidic environment ranges from pH 2.0 to 5.7.
- 115. (Currently Amended) The composition of Claim 105, further comprising sulfated polysaccharides selected from the group consisting of carrageenans, chondroitin, heparin, dextran, cyclodextrins and or combinations thereof.
- 116. (Currently Amended) The composition of Claim 105, wherein the glyceride is selected from the group consisting of enzymatically modified oils, fats, and fatty acids of mono-, di-, and tri-glycerides; lipolyzed modified oils, fats, and fatty acids of mono-, di-, and tri-glycerides; and or combinations thereof.
- 117. (Previously presented) The composition of Claim 111, wherein the fruit concentrate sweetener comprises a blend of hydrolyzed starch having a dextrose equivalent of up to approximately 25; fruit juice or fruit syrup concentrate of at least approximately 40% soluble solids; and approximately 0% insoluble solids, wherein the starch, juice or concentrate and solids form a liquor having a dry weight composition of

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approximately 40 to approximately 65% complex carbohydrates, approximately 35 to approximately 55% simple sugars from the fruit juice or fruit syrup concentrate, and approximately 0 to approximately 5% nutritional components occurring naturally in the fruit juice or fruit syrup concentrate.

- casein phosphopeptide <u>complex</u>, wherein the <u>polycationic</u> casein phosphopeptide <u>complex</u> imparts at least one function selected from the group consisting of inhibiting oxidation of oil-in-water or water-in-oil emulsions, preventing bone mineral loss in a mammal, and preventing hypercholesterolemia in a mammal, <u>and at least one oil or oil soluble active operable to inhibit oxidation selected from the group consisting of vegetable oils including rice bran oil, flax, chia, hemp, castor, soybean, lesquerella, <u>dehydrated castor oil</u>, oil rich in Omega-3, or conjugated linoleic acid, animal oils including fish, egg, poultry, and beef oils rich in Omega-3, or conjugated linoleic acid, and or oil-soluble actives including vitamins, nutraceuticals, pharmaceuticals, or flavors, or combinations thereof.</u>
- 119. (Currently Amended) The product of Claim 118, wherein the product is selected from the group consisting of cocoa products, hypercholesterolemia preventatives, bone mineral loss preventatives, Omega-3-rich oil products, products having oil-soluble flavors, products having oil-soluble vitamins, nutraceuticals, or pharmaceuticals, protein rich products having reduced protein settling and sedimentation, and transparent beverages, products containing vegetable oils including rice bran oil, flax, chia, hemp, castor, soybean, lesquerella, dehydrated castor oil, rich in Omega 3, or conjugated linoleic acid, animal oils including fish, egg, poultry, and beef oils rich in Omega 3, or conjugated linoleic acid, and combinations thereof.
- 120. (New) The composition of Claim 105, wherein the polycationic casein fragment is a caseinophosphopeptide-chitosan complex immiscible in oil.
- 121. (New) The composition of Claim 105, wherein the polycationic casein fragment is a polycationic caprine casein fragment.

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- 122. (New) The composition of Claim 118, wherein the <u>polycationic</u> casein phosphopeptide is a caseinophosphopeptide-chitosan complex immiscible in oil.
- 123. (New) The composition of Claim 118, wherein the <u>polycationic</u> casein phosphopeptide is a polycationic caprine casein phosphopeptide.
- 124. (New) The composition of Claim 88, wherein the vegetable oil is selected from the group consisting of rice bran oil, flax oil, chia oil, hemp oil, castor oil, soybean oil, lesquerella oil, dehydrated castor oil, oil rich in Omega-3 and conjugated linoleic acid.
- 125. (New) The composition of Claim 88, wherein the animal oil is selected from the group consisting of fish, egg, poultry, and beef oils rich in Omega-3 and conjugated linoleic acid.